MINING DEVELOPMENT IN ORGAN MOUNTAINS

The Organ mining district, Dona Ana county, New Mexico, is one of the older mining centers of New Mexico, and has seen booms and depressions for over half a century, its first boom in modern times being due to the discovery of large deposits of silver-lead ore in 1866 by a Mexican with whom Hugh Stephenson of Mesilla was associated, on the western side of the Organ mountains, 14 miles east of Las Cruces, and about 50 miles north of El Paso. From this discovery during the decade preceding the Civil War over $100,000 was extracted and smelted by crude methods. Since then these lead-silver mines have produced nearly $1,000,000 more.

The war caused a lull for nearly two decades, until the next boom in 1881, when the advent of the railroads brought a new crowd of prospectors, who located a hundred or more claims in the mountain range within a radius of ten miles. After extracting a large tonnage of extremely rich silver ores, roughly estimated at from $150,000 to $200,000, skimming the rich mineral cream from the surface from dozens of shallow workings, these old timers, most of whom were tenderfeet, either sold out to non-residents or hiked out for other virgin fields, and another lull occurred for a period of over ten years, when another wild rush followed, lmostly from El Paso, on the reported discovery of gold over San Augustine Pass, on the eastern side of the mountain.

This rush established the famous "Black Mountain Gold Camp" in the fall and winter of 1893-4, which soon had a floating population of about 500 gold hunters, most of whom were "tenderfeet." From these later gold discoveries about $150,000 has been extracted. This boom also suddenly died out.

Next came the copper boom, with the discovery of the Torpedo mine at the close of the Spanish-American War, and the reopening of the Excelsior and the Memphis copper mines. During the next decade there was over a million dollars worth of copper produced from these mines. Then there came another dull, due to several causes, principally to strife and litigation and also bad management. And now the psychological moment is approaching for a permanent and prosperous revival and reopening of the dormant old bonanzas. From careful observations over a wide field it is predicted that in this reopening there will be added to the copper and lead-silver mines some very important zinc producers.

The camp and mining district of Organ is ideal for beautiful scenery, climate and accessibility. In company with E. H. Rodgers and others in their Studebaker cars the trip was made Sunday morning from El Paso by way of Las Cruces in about three and a half hours, over splendid roads, to the little mining camp of Organ nestled on the level mesa below and west of the famous San Augustine Pass, and at an elevation of about 5,000 feet. The elevation of San Augustine Pass is 5,654 feet. Immediately north of the pass there rises the prominent "Peak" of the same name to an elevation of 6,850 feet, and a couple of miles south the range culminates in Organ Peak, with an eelvation of 9,850 feet. The summit of the granite range is more or less covered with pine trees and on the slopes are scattered small oaks, cedars and junipers, while the mesas and foothills are green with grass, mesquite and greasewood shrubbery. Water is abundant in springs and in mining shafts. The scenery is grand and beautiful. On the western side are the columnar, fluted spires, whence the name Organ is derived.

On the east side the granite mountain mass presents a panorama, just south of Cox's ranch, unsurpassed anywhere in the Southwest for grandeur, as viewed from the pass, the bold escarpment rising almost perpendicularly above the plain to a sheer altitude of nearly 5,000 feet.

The climate is simply superb the entire year. Organ camp is a small hamlet of about 150 people, but in the boom days boasted of over 1,000. It has two stores, one owned by I. R. Bentley and the other by Col. M. C. Logan, carrying complete stocks of merchandise and miners' and ranch supplies.

Mr. Bentley has recently succeeded Colonel Logan as postmaster and has a finely equipped assay office. Joseph Buergo conducts the only saloon in the town. There are several cosy cottages and bungalows scattered around, some constructed of wood and some of stone. A substantial stone schoo housel has recently been constructed. From town can be seen the buildings and shafthouses of the important mines. Two miles south are the buildings and concentrator of the Bennett-Stephenson mines. In the distance, 14 miles west, is the fertile valley and the city of Las Cruces, plainly visible from the hills.

According to C. R. Keyes, of the United States geological survey, the mass of the Organ mountains, from a point four miles north of San Augustine Pass to a point at least ten miles south of it, is made up of a coarse granite rock, which has a somewhat porphyritic structure, and is locally called monzanite. Through this many dikes intrude, some being aplite, others monzanite porphyry and others syenite porphyry. At the Mormon and Sunole mines a dike is found, granular almost hornblende rock, accompanying the veins. Paleozoic sedimentary rocks form a narrow interrupted belt on the western base of the range. For a considerable distance north of Organ are heavy-bedded limestones and outcrops of beds of black shale. To the south the base of the range on the west is limestone. The granite mountain mass is intrusive through the limestine country. Contact metamorphism and silicification is shown along the western contact, in which occur the greatest mineral deposits.

There are three types of mineral deposits in the Organ district: Fissure veins in the intrusive granite; replacement veins in limestone, and contact-metamorphic deposits. Most of the fissure veins contain silver with galena, zinc vlende and tetrahedrite; others carry gold associated with pyrite. The replacement veins in limestone are probably connected with fissures, but generally follow the stratification of the limestone and contain galena, wolfenite and other forms of lead, and also pyrites and zinc blende. Where the oxidized zones occur the ores are carbonates. The contact metamorphic deposits carry chiefly copper and occur for several miles along the main contact of quartz monzanite from the Torpedo mine at Organ northward. They form irregular masses, roughly following the stratification, and the primary chalcopyrite is intimately associated with a gangue of green yellowish-green garnite. Oxidation also occurs to considerable depth in several places.

This property has had perhaps the most spectacular history of any in the Organ dsitrict. Located immediately at Organ postoffice and generally devoid of surface croppings, its early development gave the camp an impetus it long had lacked. In 1896, Henry Ford, a prospector still in the camp, located the ground as a possible silver-lead prospect. His location and subsequent annual assessment work were done in an adit-tunnel driven in an embankment composed of boulders and sand, at the extreme north end of the claim. A body of iron gossan carrying some lead and silver was uncovered and this subsequently gave place to "green ore," the silicate of copper, crysocollo.

Thereafter the mine was developed and operated, at first by R. Y. Anderson and Bill Hayden, and then others, for short periods at intervals over several years until the panic of 1907, since which time, at the will of the owner, it has remained inactive. The property has a production record, variously estimated at from $800,000 to $1,000,000 gross, the ore having been shipped to smelters in El Paso, Texas, and Torreon, Mexico. Stoping was carried on to the 235-foot level and the ore proven to 307 feet, the deepest point reached by development.

The mine is notable for its deposits of chalcocite, pseumomorphic after galena and masses of crysocolla, the latter occurring up to 25 feet in width. Discovery was quite by accident, the surface of the claims being covered by a loose material of a broad "debris fan" from the range above, and characterized by an almost total lack of croppings of any nature above the known ore bodies. Quartz monzanite forms the foot wall of the deposit, between which and the unaltered blue limestone forming the hanging, there occurs a layer of silicified limestone in which the ore bodies appear to be contained. The upper ore bodies consist of large masses of crysocolla ore, averaging 10 per cent copper and but little silver, between the limestone and the granite. The gangue is a soft kaolinized and brecciated material, partly replaced by crysocolla and carrying considerable iron, manganese and lime. The ore bodies are lenticular in form. As depth is gained and approaching the 200 foot level, the silicate gives way to the black oxide of copper, melaconite. Oxidation has taken place to considerable depth, the silicate having been encountered in a crosscut from the shaft at 30 feet. The continuation of the crosscut east encountered secondary chalcocite and enriched chalcopyrite at the same level. The Torpedo property has of late been undergoing examination by Norval Welsh, a mining engineer well known in El Paso, and is under consideration by Phelps-Dodge and company interests.

The Memphis mine, property of the Memphis Mining company, and one of the older properties of the district, with a creditable production record dating from the early '80s, adjoins the Torpedo claim on the north and is located on the same contact zone. The ores heretofore produced from this claim, consisting of chalcopyrite and other copper minerals, were at one time smelted on the ground, in a water jacket furnace, and came from an ore bearing stratum in the limestone. The north end of the claim is under lease and being operated by Alford Roos and associates, who have of late been leasing successfully in the Santa Rita district. The south half of the claim is similar, geologically and mineralogically, to the Torpedo property and is under lease to Weber Brothers, who are about to close a deal for the capital required to prospect and develop the contact zone closely adjoining the Torpedo workings. Henry Foy has also been working on the western side of the same company's property under lease, and making shipments.

The Excelsior copper mine lies about one and a fourth miles north to the Memphis and town of Organ, on the main contact and is developed by an inclined shaft 200 feet deep. The ore deposit occurs in a garnetized stratum alternating with a crystaline limestone, having a width of about 20 feet of mineralization. The minerals consist of malachite, chalcocite and chalcopyrite, the latter intergrown with garnet. The property has been owned for several years by the estate of George E. Wood of Chicago. Recently it was bonded and leased by Benjamin L. Farrar, the well known mining man and banker of El Paso, and E. C. Bice, the latter being manager. They have already opened up an ore body of considerable width, and according to local rumors, have broken down ten carloads of rich copper ore in the mine and have shipped three carlonds to the El Paso smelter. Work has been temporarily suspended on account of some legal difficulties over title. The Excelsior has been a large producer of copper and is unquestionably a big mine. It was discovered and worked by Elijah Davis as a silver mine in the early '80s, who is still living at Organ. The Excelsior group includes the Kalamazoo, Michigan, Silver Set, Chicago, Excelsior and Last Chance. It was successfully operated by Anderson and Hayden about 14 years ago.

The Modoc mine, six miles south of Organ, and also a few miles south of the Bennett-Stephenson group, consists of two patented claims, and patented mill site and is developed by an incline shaft 200 feet and a tunnel which cuts the incline at 100 feet depth. The property, idle at present, has the reputation of having produced about $150,000, according to John S. Martin, local representative of the owners. There is a 100 ton concentrating mill below the mine. The ore deposits occur at the contact of limestone and anesite and consists of non-argentiferous galena and is in an epidote gangue. Attempts of concentrating by dry methods are said to have been a failure. On the property are 14 buildings and the company holds ten other claims. About a decade ago considerable lead was shipped to the Deming smelter.

Another most prominent property in the distreit is the Bennett-Stephenson mines, owned by the Organ Mountain Mining compny situated on the western side of the Organ range, one and one-half miles south of Organ, which was discovered, as above stated, in 1849 and the ores smelted in adobe furnaces at Las Cruces. Its production between 1854 and 1857 was estimated at $90,000. The value of total ore produced to 1906, inclusive, according to the United States geological survey was $600,000. Some say its production to date has amounted to about one million dollars. The ores and lead and silver, which consists of both carbonates and sulphides. The ore deposits consist of two bedded veins following the stratification, at least approximately. Immediately below the croppings on the eastern and principal vein, rich masses of cerusite were opened, and old stopes being in places at least 15 feet wide. There is also an abundance of oxidized lead ore, some of which is very rich. This vein has been opened on the main tunnel level. The west vein was opened on both levels, showing wide stopes of mixed lead carbonate and galena. The mine contains remarkable deposits of Wulfenite samples of which took the premium at the long adit drainage tunnel and numerous world's fair.

Development is by a long adit drainage tunnel and numerous shafts, winzes and drifts aggregating one and one-half miles of workings. There are 17 claims in the property, extending 7,500 feet along the contact, in which are the Stephenson vein, which has yielded $300,000; the Henderson vein, cropping 1,000 feet, a good producer, and the Paige vein, which has yielded $50,000. The Stephenson stope is 15 to 18 feet wide; the Bennett has a stope called the Carrera stope, 18 feet wide and 150 feet deep; in the Mill level stopes 18 to 20 feet wide, 450 feet below the apex. At 800 feet below the apex are stopes 25 to 40 feet wide. These stopes were over 100 feet long. The property is equipped with a concentrating plant of 250 tons daily capacity. J. I. McCullough is manager and representative of the company. Recently lessees have been working portions of the mines. Vincent B. May of Las Cruces is vice president.

The Big Three mining properties, consisting of the Ruby, Eclipse, Plutus, Badger, London, Raven and Wedge, owned by Captain C. B. Gill, George M. Lerchen, mining engineer, and Dr. J. H. Johnson, lie east of and adjoining the Excelsior group. The main workings are on the Ruby, including a shaft 116 feet deep, equipped with a 12-horsepower gasoline hoist in a newly built power house. The owners have been successfully operating the properay the past year.